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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,298		Harri Hurme	3502-1095	3482
466	7590	04/13/2007	EXAMINER	
YOUNG & THOMPSON			DEB, ANJAN K	
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ARLINGTON, VA 22202			PAPER NUMBER	
			2858	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/13/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/700,298

Applicant(s)

HURME, HARRI

Examiner

Anjan K. Deb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 5 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/13/2000</u> . | 6) <input type="checkbox"/> Other: _____  |

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## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because it does not conform to US Patent preferred layout for the specification. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### ***Arrangement Of The Specification***

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

***Drawings***

2. The drawings are objected to because suitable descriptive legends is required in box 307 and 308, 306 (see MPEP 608.02). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3, 6-8, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennett (US 4,127,824 A).

Re claims 1 and 7, Bennett discloses electric device and method for detecting the presence of a signal of a certain frequency (frequency to be detected)(abstract) in a line connection (11,64), characterized in that it comprises at least three energy-storing components (17, 18, 19) connected in parallel to said line connection, switching means (14,15,16) for making a connection selectively from each energy storing component to a certain reference, means (43, 44, 46) for controlling said switching means at a predetermined frequency, and means (DETECT OUT) for measuring a certain quantity comparable to the energy stored from each energy-storing component.

Re claims 2 and 8, Bennett discloses said switching means (14,15,16) are arranged to make a connection from each energy-storing component (17, 18, 19) to the reference (column 1 line 64) once during the cycle time (120° apart) of said signal to be detected.

Re claim 3, Bennett discloses said energy-storing components are capacitances (17, 18, 19), whereby said means (29,34,42,39) for measuring the quantity comparable to the energy stored comprise means (39), for measuring the voltage difference between capacitances, and said reference is a certain standard potential ( $V_{\text{THRESHOLD}}$ ).

Re claims 6 and 10, Bennett discloses post detection filtering (column 1 line 36).

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett (US 4,127,824 A) as applied to claims 1-3 above, in view of Puthuff (US 3,604,947).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Re claim 4, Bennett discloses three capacitances (17, 18, 19) as energy-storing components, whereby the means for measuring the voltage difference between capacitances and switching means (14,15,16) are arranged to make a connection from each capacitance to the standard potential ( $V_{\text{THRESHOLD}}$ ).

Bennett did not expressly disclose a fourth capacitor.

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Puthuff disclosed method and circuit for detecting frequency components of a signal comprising first, second, third, and fourth storage capacitor connected in parallel to input signal line and each capacitor is connected by switch for selective switching by control circuit (Fig. 22).

At the time the invention was made it would have been obvious for one of ordinary skill in the art to modify Bennett by adding fourth capacitor connected in parallel to signal line disclosed by Puthuff for achieving a desired filter characteristic required so as to filter the input waveform for a certain bandwidth for detecting a signal having a certain frequency (column 5 lines 14-16).

***Allowable Subject Matter***

7. Claims 5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Re claim 5, the prior art does not teach or render obvious energy-storing components are inductances whereby said means for measuring the quantity comparable to the energy stored comprise means for measuring the current difference between inductances.

Re claim 9, the prior art does not teach or render obvious number of energy-storing components are connected to the reference in turns during the cycle time of the signal to be detected in the order from one to N, where N is an even number, and in the measurement of the value of the quantity comparable to the energy stored the values related to the first and the  $(N/2 + 1)$ th component are compared, and similarly the values related to the second and the  $(N/2 + 2)$ th

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component and so forth up to the  $i$ th and  $(N/2 + i)$ th component are compared, until  $(N/2 + i) = N$ .

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aarai (US 5,189,378) discloses signal detecting circuit comprising at least three energy storage components (fig. 2).

Drumheller (US 3,805,171 a) discloses signal frequency detection circuit comprising plurality of bandpass filters (Fig. 4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Anjan K. Deb whose telephone number is 571-272-2228. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached at (571) 272-2168.



**Anjan K. Deb, P.E, Ph.D.**

Primary Patent Examiner

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4/5/07

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